

THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

Meeting Minutes for April 13, 2000

Commission Members in Attendance:

Peter C. Webber Commissioner, Department of Environmental Management

Lee Corte-Real Designee, Department of Food and Agriculture Joe McGinn Designee, Metropolitan District Commission

Marilyn Contreas Designee, Division of Housing and Community Development

Francis J. Veale Public Member

Mark Tisa Department of Fish, Wildlife and Environmental Law Enforcement

Bob Zimmerman Public Member

Mark P. Smith Designee, Secretary of Environmental Affairs

Joseph E. Pelczarski Designee, Coastal Zone Management

Gary Clayton Public Member

Arleen O'Donnell Designee, Department of Environmental Protection

Others in Attendance:

Lou Wagner MAS
Robert P. Bell EarthTech

Joan F. Sozio Foxborough Board of Water & Sewer Commissioners

Jesse Schwalbaum EarthTech

Cary Parsons
Richard Friend
Daniel Garson
Dan Donovan
Louis P. Amoruso
John D'Agostino
Lee Azinheira
Woodard & Curran
Woodard & Curran
Town of Mansfield
Town of Mansfield
Town of Mansfield

Rich Tomczyk EOEA Duane LeVangie DEP Lealdon Langley DEP

Nina Danforth

Linda Marler

Vicki Gartland

Michele Drury

John Magenheimer

Mike Gildesgame

DEM, Office of Water Resources

Richard Thibedeau DEM Jenny Mendez Isenburg MWRA Jonathan Yeo MWRA Lorraine M. Downey
Dave DeLorenzo
Ian Cooke

MWRA
DEP SERO
NepRWA

Agenda Item #1: Executive Director's Report:

- Watershed Initiative events: Roundtable meeting will be next week to establish funding priorities for 2000. \$3.9 Million in projects proposed by 27 watershed teams will be funded by the state. Water quantity and quality issues of interest to the Commission are being addressed.
- Merrimack River Army Corps project: The WRC scoping study for priorities on the
 Merrimack will be supplemented. A press conference will be held on Monday with
 Secretary Durand, Senator Bob Smith and Bob Varney of NH, mayors supporting a larger
 Army Corps study, 3 years, \$7.5 Mil to address river issues, also to coordinate the five
 communities doing CSO work. The objective will be to maximize the money spent on those
 programs. The project is being supported by Senator Kerry.
- SuAsCo Community Council River Visions Forum was attended by Secretary Durand, Congressman Marty Meehan. This was the third council meeting with local officials. Smith spoke on streamflow issues. The forum was well attended and drew a good mix of people.
- Upcoming Run of the Charles canoe race April 30. EOEA and DEM are fielding teams.
- Community Preservation Initiative: Secretary Durand has been working with the Departments of Housing and Community Development and Transportation to raise awareness of community preservation in the Commonwealth. EOEA has been performing Buildout Analyses for all 351 towns. Recently Executive Order 418 was issued to help towns prepare Community Development and Preservation Plans, including water resources. Water supply, wastewater issues, and natural water resources will be included in the plans. Smith and Zimmerman will participate to determine how communities can analyze keeping water local, maintaining a balance between water needs, wastewater, and infrastructure.
- The Town of Holliston prepared the first community plan for a decentralized approach for wastewater. A Town meeting vote was held on the \$8 Million cost above available funds and was defeated. This was not an end to the initiative but will require a modification to the approach. Bellingham is also doing a good job promoting the decentralized approach.
- Smith noted a Boston Globe 4/13/2000 article on low-flow toilets. There was a national level effort to repeal the plumbing standards on low-flow toilets. The proposal was defeated at the committee level by one vote. Massachusetts was the first state to have the low-flow toilet standard and it is easier to maintain if it is also a national standard. Vigilance is necessary to maintain the standard as it may come back up on the House floor.
- The closing arguments are being delivered on the EPA and MWRA filtration court case and a decision is due in a few weeks. Important related to water conservation and watershed protection. Comprehensive approach to water management.

Gildesgame noted that the May Commission meeting will be held at MDC.

Hydrologic Conditions Report

Marler gave the current conditions report. Precipitation during March was above normal across the state but not enough to get out of the deficit. Precipitation during the first 12 days of April 2000 is more than all of April 1999. Statewide precipitation water year cumulative is 94% percent of normal. The state is below where we were in April 1999 and that is of concern based on the dry summer experienced in 1999. Similar climatic trends on temperature and precipitation are forecast for the summer. There is a need to stay on-guard with respect to water conservation. The Central region is the most significant at 86% cumulative percent normal for the water year. The Northeast and Connecticut River valley regions are not far behind at 88%. The Southeast region is at 108% of normal.

The Drought Management Task Force (DMTF) is working on a Draft Standard Operating Procedure (SOP) for Drought. DEM has been working out drought stages, and hopes to have the plan ready to implement this summer if necessary. DEP mailed out a survey to communities to determine their ability to implement water use restrictions, and encouraged towns to adopt bylaws if they are not already in place. Marler attended a New England Water Works Association meeting and spoke to groups about the precipitation deficit and had a booth in the exhibit hall depicting recent precipitation trends. Water supply reservoirs are filling to operators' satisfaction, and some are spilling over. Worcester's reservoir is full.

The DEM Fire Bureau reported almost 300 fires last Saturday. The forecast for April, May, and June predicts above normal temperatures, below normal precipitation. USGS ground water levels for March were generally normal with some areas above and some below normal. Ground water levels on Cape Cod and the islands have been below normal for months. Surface water flow in March was above normal in the western part of state, and normal for eastern part of the state. Current streamflow appears near median levels but the data are deceiving. Flow increases in response to storm events and returns to below normal. Flow has been on the decline since last September's tropical storms.

Smith noted the April 26 DMTF meeting and indicated we will hear more forecasts from the National Weather Service, review the draft SOP, and establish additional steps that need to be taken.

Agenda Item #2: Vote: Meeting Minutes

Regarding the July 1999 minutes, Smith noted that staff are slowly catching up with transcribing minutes.

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A motion was made by McGinn and seconded by Zimmerman:

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TO ACCEPT THE JULY 1999 MINUTES.

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The motion passed unanimously by those present with one abstention by Clayton.

<u>Agenda Item #3 Staff Recommendation on Mansfield Interbasin Transfer</u> <u>Application for Morrison Well</u>

Summary: Drury referred to the Staff Recommendation presented at the March 9th WRC meeting, and summarized the project: the proposed Morrison Well #10 is in the Ten Mile River basin. Wastewater will be discharged to the Mansfield treatment plant in Norton in the Taunton River basin. Therefore, water crosses both a town line and a basin line for ultimate discharge. The Town and its consultants addressed impacts to the Atlantic white cedar swamp, which supports two rare and endangered species, water supplies downstream, and the proposed water supplies for the Town of Foxborough upstream. The April 13 synopsis of the staff recommendation lists the IBT criteria and how the Mansfield application addresses those criteria. The synopsis also lists the conditions recommended for approval. Mansfield meets, or is in the process of meeting, the applicable criteria of the Interbasin Transfer Act. The staff recommendation is contingent on Mansfield committing to meeting all of the criteria prior to the well being installed.

A public hearing was held on the Staff Recommendation on March 20. There was not a great turnout at the hearing, but most attendees were in favor of the project. Emily Brunkhurst of Mass. Audubon Society voiced some concerns about Mansfield's conservation programs but offered to help the Town work on those. Staff urges the Town to continue working with Audubon on conservation issues. The April 13 synopsis contains four comment letters received on the staff recommendation and the application. Two letters from Representative Hyland and the Ten Mile Team leader supported the staff recommendation. Letters from Earth Tech and The Nature Conservancy raised some technical issues. Staff has directed Woodard & Curran to respond to those.

Technical Issues: Marler presented a review of the application and the significant technical issues that led to the staff recommendation. Proposed Well #10 in Mansfield is located near existing Well #6 in the Bungay River basin. Well #6 has been in use for over 20 years. Both of the wells are located in a former sand and gravel pit in Mansfield near the Foxborough, Plainville, and North Attleborough Town lines. A hydrologic data transfer was attempted to evaluate the impacts of pumping on streamflow; however, the topographic drainage divide does not function as a ground water divide. The wells are sited in the top of the watershed, with less than half a square mile of drainage area. Some ground water underflow appears to be crossing the topographic divide under Route 106 from Lake Mirimichi, in the Taunton River basin. Geologic cross sections depict the bedrock basin which defines flow in the area, pinching out near Route 95. The wells pump from the sand and gravel aquifer. Ground water flows from Lake Mirimichi into Witch Pond, although the nature of the hydraulic connection is not well understood. Shallow flow continues on the perched peat wetland which is underlain by a silt layer. The wetland has a hummock and hollow topography and supports an Atlantic white cedar swamp, which is home to two rare/endangered species: the Hessel's Hairstreak butterfly and the spotted turtle. Research on hydrologic requirements of the Atlantic white cedar swamp did not turn up quantitative information; however, it appears that the swamp is dependent on seasonal inundation and a near-surface water table to prevent invasion by less water-tolerant species (red maple). Normally, summer water table levels are within about 1.5 to 3 feet of the surface of the hollows. Research was not available to predict the impacts of pumping the lower aquifer on the

swamp. A cross section west to east across the valley depicts the Atlantic white cedar swamp as having a peat layer and, in places, underlain by silt. An esker is present between the swamp and Bungay Brook. The brook is also underlain by the peat and silt layer. The staff recommendation was based on a number of factors that supported this characterization; no one piece of evidence was compelling by itself.

- 1998 pumping test on Well #10. Water levels were monitored in the aquifer, in the peat layer, surface water in Bungay Brook, and at the Foxborough well site. The peat layer showed very little response to pumping (the water table rose in response to rainfall events). The aquifer near Bungay Brook responded after one day: there was a generally downward decline in response to pumping. Other wells showed similar trends during the pumping test. The pumping test allowed observation of aquifer drawdown at a significant pumping stress of 1.7 mgd; and it showed the extent of the drawdown cone. Downward vertical gradients were observed from the surface water and peat into the sand and gravel aquifer. Flow in Bungay Brook is not dependent on ground water recharge from the aquifer. Under both pumping and non-pumping conditions, there is a downward vertical gradient and whatever flow there is between the peat and silt layer is downward, not upward. There was a low level of response in the peat water table level in the Atlantic white cedar swamp and beneath Bungay Brook. There is a limited amount of drawdown beneath the wetlands; therefore, there is a limited amount of hydraulic influence from pumping the well on the wetlands above it. The aguifer drawdown cone extended beyond Bungay Brook to the east, and indicated that wetland drainage was not sufficient to stabilize the cone. This suggests that the wetland will not drain into the aquifer under the stress of pumping. There was a lack of interference at the Foxborough well site.
- Summer 1999 measurements. Ground water levels measured in a period of below-normal precipitation in Mansfield (53 percent of normal April through August) in the summer of 1999 were conservative. Well #6 was pumping at 0.5 mgd at the site, and allowed observation under a pumping influence. The water level observations verified the hydraulic isolation between the wetlands, surface water, and aquifer during a dry period and verified the pumping test results. The water table trend was extrapolated out beyond the measurement period to 90 days. Under extrapolated conditions, the shallow water table was still in the peat/silt layer. The Atlantic white cedar swamp water level was still within four inches of the surface in August. These observations were consistent with Woodard & Curran's model and the IBT application. The peat, the surface water and wetlands showed a slow decline while the aquifer water levels showed more of a decline (with Well #6 pumping). These data showed the hydrologic conditions beneath the wetland resources.
- Ground Water Modeling: Woodard & Curran predicted drawdown under three different recharge conditions: (1) 16 hours a day pumping existing wells; (2) existing and future proposed wells pumping at maximum pumping rates under normal recharge conditions; and (3) all wells pumping at maximum levels during a 90 day drought condition. The greatest impacts are closest to the wells. During the summer of 1999, Bungay Brook went dry at the end of June, but it was considered to be a natural condition for a small, shallow brook and did not appear to be associated with pumping Well #6. Staff performed an independent analysis of distance versus drawdown. Drawdown caused by Well #10 beneath the wetlands will be

2.5 to 3.5 feet, which is not a large hydraulic influence. Using the pumping test data, staff performed an analysis that simulated Well #10 and Well #6 each pumping at 700 gpm. This resulted in similar drawdowns as simulated by the Woodard & Curran model. Staff also compared the extrapolated 1999 water levels with the Woodard & Curran ground water model simulations. The model predicted 150 feet elevation in the aquifer, while the extrapolation yielded 148 feet elevation in the aquifer near Bungay Brook. This gave staff confidence in the application.

Because research hasn't been done on the impacts of pumping near an Atlantic white cedar swamp, the Staff Recommendation is for approval with a condition for a monitoring program to assure that the well will not cause impacts. The staff recommendation proposes a monitoring plan to be developed with agency input and approval, baseline monitoring for one year before the well starts pumping, and operational monitoring to verify that the expected conditions occur. Staff expect that seasonal inundation will continue and that water table levels will remain within one foot of the swamp surface. The staff recommendation assigned compliance water levels for well operation. After five years of monitoring, Mansfield could request alternative compliance levels if ambient area data suggest these are appropriate. We will request that DEP use these compliance water levels in the Water Management Act permit to regulate well operation. Compliance elevations are proposed in the sand and gravel aquifer where the edge of Atlantic White cedar swamp is nearest to the well, and at Bungay Brook. Staff are also proposing compliance elevations in the peat layer within the Atlantic white cedar swamp nearest Well #10. The levels selected are consistent with the needs of the Atlantic white cedar swamp (within one foot of the surface) and would limit aquifer hydraulic influence to that which has already been observed. These levels are consistent with Mansfield's consultant's simulations in the IBT application, and with summer of 1999 observations (including near surface water table levels in the swamp).

Required Conditions: Drury reviewed the conditions in the April 13 synopsis. The Town has leak detection inspections every two years and one is scheduled for this year. Mansfield is in the process of metering their 35 unmetered services and is required to retrofit the remaining public buildings that need low-flow devices. A water audit is required. The past five years' residential average gpcd was over 65 gpcd, so an aggressive residential conservation program will be required in accordance with the performance standards. A program to provide showerheads and other low-flow devices is in place; however Staff are requiring a more aggressive program. Also, Staff are requiring more aggressive water conservation for the industrial/commercial sector. Last month Mansfield indicated it was investigating reuse of water at a golf course for irrigation and at a commercial establishment for toilet flushing. A big issue in the Mansfield area is the Great Waves water park. The town is working with Great Waves on water re-use. Mansfield is downsizing all of its meters and should finish by the end of the year as required.

Conditions for maintaining reasonable in-stream flow were translated into protecting the environmental resources, as just discussed by Marler. Another outstanding issue is the local Water Resources Management Plan. The regulations require that the town has adopted or is in the process of adopting a local Water Resources Management Plan. The town has most of the components in place and they are working on a water supply plan now. Staff are requiring that these pieces be put together into one package for Commission approval. Also, because there is

not a lot known about the impacts of pumping on Atlantic white cedar swamps, Staff have a requirement that Mansfield commit to abiding by any restrictions that may be placed on the use of the well if the monitoring program shows impacts.

<u>Comments:</u> Staff required Mansfield to address some issues raised during the public comment period. Those comments are in the April 13 staff recommendation. The first is from The Nature Conservancy and the second was from Earth Tech, the Town of Foxborough's consultant. (Representatives from both Mansfield and Foxborough were acknowledged). Comments raised questions about the modeling approach and the modeling assumptions and staff felt that it was incumbent on Woodard & Curran to respond to these questions and defend their model.

Marler expanded on the technical comments. The Nature Conservancy raised some issues about how Woodard & Curran had characterized the peat and the effects of "wicking" and on observations of standing water in the wetland. They were concerned that Woodard & Curran had been confusing capillary fringe with an actual water table. Staff relied more on the actual hydraulic observations (water level measurements) that were made in the peat rather than assertions about wicking or a capillary fringe that might develop in that material. Standing water was observed in a borehole that was drilled with a hand auger. Because it was an actual free surface of water a few inches below the surface, it was a valid observation. Another concern of The Nature Conservancy was the extent of the silt layer that was modeled. Staff felt that the silt layer was modeled appropriately considering the numbers and locations of observations made. A reasonable effort at characterizing the extent of the silt had been made.

Marler addressed comments made by Earth Tech on behalf of Foxborough. In its first paragraph, Earth Tech agreed that the proposed well would not cause undue stress to the Bungay Brook ecology. Although they agree with the conclusions, they disagree with the method that was used to arrive at those conclusions. In particular, they disagreed with the ground water modeling approach that was used by Woodard & Curran, specifically with the use of river nodes that could result in an underestimation of aquifer drawdown and that the model is unable to predict impacts to the wetlands and Bungay Brook. Woodard & Curran responded to these concerns as requested by staff. Woodard & Curran claimed that they had assigned river nodes in their ground water model for Witch Pond, Bungay Brook, and the wetlands. Those function independently. The river nodes were assigned heads within the model. They had originally simulated a 180-day drought in three 60-day phases. River nodes for Bungay Brook and the wetlands were turned off for the last 60-day phase of the 180-day drought. That was the result for the original submittals from Woodard & Curran. The 180-day drought has never occurred in New England. Its use stems from the DEP Zone II requirements for wellhead protection area delineation. It is meant to be overly conservative. It is not the same level that needs to be used for the interbasin transfer application to assess impacts. Staff asked Woodard & Curran to simulate a 90-day drought (which was considered more reasonable for this application). In response to the Earth Tech comments, Woodard & Curran performed a sensitivity analysis. Staff concluded that the results of the sensitivity analysis did not point out a significant flaw in the modeling approach or the conceptualization of the aquifer. Staff feel that they have satisfied this concern.

Zimmerman asked if Woodard & Curran had performed the new method recommended by Foxborough's consultant. Marler replied that Foxborough's consultant had not made a specific recommendation but rather stated a concern that the system had been modeled improperly. Zimmerman's understanding of the Foxborough letter was that the model was less conservative than what Foxborough is being held to and they were asking to be held to the same requirements. Marler replied that Foxborough's application was a separate issue. Smith clarified that one is not being held to a different standard than the other. Smith's understanding is that the different aquifer declines predicted by the different modeling runs conducted by Woodard & Curran was not that significant, and is within the range of the model's accuracy. The model was valid and this was one more way of testing the model. As a further check, Marler ran analytical equations to predict aquifer draw down for 90 days of a 2 mgd withdrawal without any recharge from any source. Under the wetland area, it showed five to seven feet of drawdown and showed that the model was reasonably predicting what would happen. The same simulation was run for 180 days and didn't change significantly. It validated that Woodard & Curran's model was not susceptible to changes based on use of the river nodes and it still meets our characterization of the site hydraulics.

WRC Questions and Comments: Smith asked for questions or comments from the Commission on the staff recommendation, the analysis, or the questions raised by The Nature Conservancy, the Town of Foxborough, or Earth Tech. Zimmerman asked to see the location of the Foxborough well in relation to the Mansfield well and also asked about their hydraulic link. The well locations were pointed out on a map and Marler answered that the Foxborough wells were monitored during the pumping test and there was not any measurable impact at these well sites from pumping Well #10. Schwalbaum stated that there is a hydraulic link. Zimmerman asked Schwalbaum to explain the connection between the wells. Schwalbaum stated that it is one continuous aguifer and Woodard & Curran and Earth Tech have the same conceptual model of how the aquifer works. Marler indicated that the continuation of the sand and gravel was depicted on the down-valley cross section. Smith reiterated that while it is the same aguifer, the impacts of the Well #10 pumping test were not measurable at the Foxborough well site. Schwalbaum interjected that this was only during the pumping test for a few days. Zimmerman asked if the two cones intercept. Marler added that the wells' Zone II's would probably overlap. They are both receiving their recharge from Lake Mirimichi to the north. Smith added that the wells are also receiving recharge from the outer edge of the aquifer in the sand and gravel pit.

Marler stated that, in its application for Well #10, Mansfield's consultants considered all of the wells pumping simultaneously in its analysis. The two Foxborough wells were simulated as if they were on-line and pumping, with Mansfield's existing Well #6, and the Albertini wells. Everything was factored into the analysis. Smith stated that this was required to evaluate the cumulative impacts. Staff also worked on a common understanding of the area because when the process started, the hydrology was not clear. The two communities worked together to come to a common understanding. The hydraulics function more like a pond than a stream.

Each consultant ran a slightly different ground water model. Earth Tech's model was more conservative in some ways and they raised valid questions. However, the hydraulic separation between the wetlands and the aquifer is the key to our understanding of this system and to the Staff Recommendation. The conditions of the Staff Recommendation and the thresholds keeping

the water level within a foot of the top of the swamp and limiting the aquifer drawdowns to what was modeled are the real protection for the swamp. The thresholds give the protection; the modeling allows staff to make the recommendation to the Commission that there will not be an impact. If the model turns out to be wrong, it will be the town that suffers because they won't be able to use the well as much.

Smith noted that performance standards are supposed to be met in advance of approval, but because of the two-year transition period, the Town was asked to commit in writing to fulfill the performance standards before the Commission approves the decision. Staff are recommending approval but have not yet received the commitment from the town. A written commitment will be needed before the next meeting. Clayton noted that it was unclear when some of the conditions were to be performed. Drury indicated that the conditions were all to be met prior to the well being installed.

Clayton asked about status of the white cedar swamp. He is still concerned about the unknown effects of modifying the hydrology in the area, although he appreciates that the proposed conditions require "early warning" through the monitoring plan. Clayton asked if staff consulted with the Natural Heritage Program and if the recommendation and conditions reflect their input. Drury indicated that staff met with Natural Heritage program, The Nature Conservancy and other experts from the Harvard Forest about the ecology of the Atlantic White Cedar swamp before coming to the recommendation. Staff was also in close consultation with Hanni Dinkeloo of Natural Heritage about this application. Staff required that the monitoring plan be approved by the agencies including Natural Heritage and will schedule a meeting with the agencies to provide input to a monitoring plan. Clayton asked whether there was an agreement at the meeting of whether a monitoring plan could be developed to adequately address the questions and uncertainties. Drury responded that there is always a risk that when the monitoring shows some results, it may be too late. It is a good opportunity to start collecting the data. Results will be made public. Smith indicated that there is some agreement on approaches. For example, it was suggested that Staff not focus on vegetation monitoring because it is so variable and hard to track, but focus instead on the hydrologic monitoring and target important vegetative species, such as nectar sources for the listed species. The Atlantic white cedars are fairly resilient so impacts would not be seen in the short-term. Staff don't expect impacts because of the requirement that the water level be kept within a foot of the surface (which the experts agreed was within the root level of the swamp). Lowering the aquifer water level could have an impact on the swamp.

Clayton asked if the monitoring program reconciles the conflicting opinions about the models used in this analysis. Drury responded that the monitoring plan's purpose is to protect the resource. The data will characterize whether an impact occurs or does not occur, what type of an impact occurs, and the reaction of the resource to those impacts. It is unclear whether the data will validate the model but Staff will know what is going on out there. It may indicate if the model was incorrect.

Zimmerman asked if the Commission is requiring that Earth Tech's model be run with both wells running. He asked to see Earth Tech's model results for comparison. Smith indicated that Foxborough was still in the pre-application stage and that the Commission would be able to see

their model in the same level of detail when their application comes forward. Zimmerman wanted to be able to assess the potential damage now rather than a year from now, so that conditions can be established under extreme circumstances. Drury added that both communities were asked to model each other's withdrawals to get an idea of the cumulative impacts of both sets of wells. But it is incumbent on each community to demonstrate the local impacts as well. Staff have a full application from Mansfield that is in the review and recommendation process. Foxborough is still in the pre-application process. Staff understand that Foxborough is responding to our data requests and that something should be forthcoming in the near future. Foxborough's application will be evaluated on the same basis as Mansfield's application, using the seven applicable criteria of the Act. Zimmerman was concerned that the first one in will "get the prize".

Webber noted that the Commission is trying to respond to past concerns in its consideration of cumulative impacts, and the Commission is also trying to do it in compliance with the rules, with an overburdened staff. The Commission is obligated under the law and the regulations to review applications as they come in. We would like to avoid a debate or a duel between the towns and the consultants over their models. Each consultant has been asked to factor in the other town's proposals. We are reaching out to get additional information. We've been flooded with information, data, and analysis and are trying to make the right decision. We have followed the process, hearing from staff, the board, and the public. This should not be a forum to debate the models, especially when they are at different stages of the process. Smith noted that both models were run with all the wells pumping for cumulative impacts. If there was water for only one well that would have been shown with the models. It does not mean that all the local impacts will be the same. The cumulative impacts were taken into account, and all the figures depicted all of the wells pumping at full capacity. Smith emphasized that it is not a matter of the first one in gets the prize. It is about modeling impacts at each site.

O'Donnell asked if the models showed an effective separation between the aquifer and the swamp when all the wells were pumping. Marler responded that the ground water model was not attempting to predict impacts on the wetland or surface water. It was only being used to predict aquifer water levels. There is effectively a barrier between the aquifer and the swamp. Marler clarified that staff was relying on actual observations made during the pumping test under an extreme stress with Well #6 and Well #10 pumping. The effects of drawdown are much more pronounced closer to the pumping wells. Staff looked at the local impacts (caused by Wells #6 and #10) and those were not significant. Although the Foxborough wells were not pumping during the test, they are not expected to have a significant impact on the wetlands near Well #10 due to their distance from the site. Staff also relied on the observations from the summer of 1999. Well #6 has been operating at that location for about 20 years and the swamp is still in good condition. O'Donnell asked about condition 4, Criterion 5. She asked how the threshold values were arrived at. Marler explained that 153 feet corresponds to the water table that level that is expected to be one foot below the surface of the swamp. The wells would have to be shut off if the water table fell below that level. That level is expected to be within the range of natural variations within the swamp. The other compliance levels came from the Woodard & Curran model simulations. The expected drawdown nearest Well #10 at the 90-day drought was selected. The level near Bungay Brook was selected the same way. These were also consistent with the levels observed last summer. O'Donnell asked how often we expect the levels of the

swamp will fall below these levels and require the wells to be shut off. Marler responded that frequent shutdowns are not expected.

Comments from Others: Smith invited comments from the public. Schwalbaum asked if the Mansfield model includes the Foxborough wells. If this model is acceptable to WRC staff in simulating the impacts of the wells, why can't Foxborough use the same model simulation? Smith responded that Foxborough can use whatever model it chooses. The Commission does not choose models for consultants. The consultants need to document impacts from their wells. The Commission will evaluate it with the supporting data to see if it is accurate. Schwalbaum stated that part of Mansfield's goal was to evaluate impacts from their wells along with Foxborough's wells. If there is a problem with how they modeled the Foxborough wells, how can the Commission let it go? If there isn't a problem with how they modeled the Foxborough wells, why can't we use the same model? Schwalbaum directed the question to Marler. Smith responded that the question had been answered, it did not require further clarification, and further discussion would not be a good use of the Commission's time. Schwalbaum responded that it was not clear. Webber directed Schwalbaum to put his questions in writing to him and they would be clarified.

Schwalbaum indicated his discontent with the permitting process and with the Woodard & Curran model. The Woodard & Curran model cannot predict impacts to the wetland. They claim it predicts impacts to the underlying aquifer. This implies that the wetland and aquifer are separated. There is evidence of a confining unit in some areas, but overall, Schwalbaum asserted, there is a direct connection between the wetland and the aguifer. Silt was only found in three of the nine hand auger boring sites. Their model shows a connection between the wetland and the aquifer; there is no confining unit in the model separating the wetland and the aquifer. Using river nodes to simulate the wetlands results in an inaccurate water balance for the aquifer. Based on a water budget analysis of Mansfield's ground water model, after 120 days of pumping with no recharge, the wetlands are providing the pumping wells with 3 MGD of water; 90 percent of the water comes from the wetland, not the brook or Witch Pond. This directly contradicts Woodard & Curran's conceptual model. 1.5 MGD of this water would be coming from the wetland between the well and the brook. Over a period of ten days this would translate into three feet of standing water on the wetland. That water would not be there at the end of August. The water balance of the model needs to be looked at. He recommended that the Mansfield application in its current form be denied, that the ground water model be re-evaluated, and that Earth Tech and Woodard & Curran agree on a single model or have a third party decide on a model. More precise and detailed guidelines need to be developed for applications involving ground water issues.

Webber suggested that Schwalbaum submit his comments in writing to be shared with the Commission members. The Commission and Staff will try to answer and address unresolved issues. Webber asked if the recommendation for denial was made on behalf of Foxborough. Joan Sozio of the Foxborough Water & Sewer Commission stated that Foxborough is asking the Commission to arrive at a conclusive model that can simulate the Foxborough wells and the Mansfield wells at the same time. She stated that Foxborough's model is more conservative than Mansfield's and she would prefer to err on the side of conservatism. Foxborough asks that both communities have a model to represent the entire picture. They want a level playing field.

Webber again asked if Foxborough's official position is consistent with their consultants, that they recommend denial of the Mansfield interbasin transfer application. Sozio stated that this is Foxborough's position until the situation can be rectified.

Smith stated that Marler had responded to Foxborough's issues and requested that Foxborough submit written comments for clarification. The Commission works very hard to get the towns to work together, but cannot decide when the towns submit applications.

Tomczyk suggested looking at a publication of a symposium on Atlantic white cedar held a few years ago at the University of Rhode Island. Smith agreed.

Cook suggested that given the one-time nature of interbasin transfer application review, he hopes that the Commission will consider getting the pre-conditions fulfilled and consider adjustment of the conditions depending on the results of the monitoring. It should be an ongoing process.

D'Agostino stated that Mansfield has followed the process as set forth by the Commission. The Town and its consultant have followed the process dictated by the staff. He commends the staff for a comprehensive, detailed, active analysis of the water conditions in the basin. Unfortunately communities are being pitted against each other for the right to use water. Mansfield believes their model is accurate and valid, and wants the Commission to move forward with granting the application. Mansfield will abide by whatever conditions are recommended by the staff and the Commission. They are prepared to work cooperatively with the Commission. Further delay will threaten Mansfield's ability to purchase the property. Mansfield will continue to work cooperatively on a regional and statewide basis and will follow through with the recommendations of the Commission and the staff. The staff has done an excellent job and the Commission should listen to them.

Garson stated that Earth Tech's comments will not be addressed in this forum, but Woodard & Curran would like to address them in writing in the next few weeks. He disagrees with Earth Tech's conclusions about their work. Woodard & Curran has been working with New England Environmental and Normandeau Associates on wetland issues since the start of the project. The conclusions drawn by Woodard & Curran and by the staff in its independent analysis include modeling as one predictive tool. Field measurements were a second tool. An extensive field assessment by the two wetlands consultants was the third. Those consultants will be involved in working with Natural Heritage and DEP to design a monitoring program for approval by the WRC. The requirements have been fulfilled and the application stands on its own merits. They look forward to concluding the process next month.

Smith indicated that staff will address Earth Tech's comments prior to the next meeting. A copy of the final decision document will be sent out in advance to allow Commission members to read it. Smith asks the Commission members to review the conditions, as these will be protective of the swamp. The way they are written is such that no change from the current condition will be allowed. Commission members should call with questions. A letter of commitment to meet the conditions from the town is necessary before the application can be approved.

Zimmerman is concerned about Foxborough's statement that whichever town gets across the line first, wins the prize. Foxborough's implication is that their investigation reveals some impacts. It would be a good idea to look at what those impacts might be and to address them in the conditions. Some questions remain and we should figure out if we can address those issues. Smith replies that the conditions will keep the water level within a foot of the top of the swamp and at a level of 147 feet in the aquifer, very close to existing conditions. The risk is to the community. If the impacts are different, they will not be using the well. If they are wrong, it will be their responsibility.

Agenda Item 5: DEP BMP's and Draft Water Use Policy for Golf Courses

Langley gave the update presentation. DEP has been working for several months to develop a policy on golf courses. The need arises because over the past several years, golf courses have come in for permitting under the Water Management Act, all of which used a variety of different methodologies to estimate the amount of water they would be using. DEP's focus is on the three month threshold of nine million gallons total withdrawal applied to seasonal users. The majority of their use is concentrated in a three month period. A technical advisory committee was developed consisting of golf course consultants, attorneys, agency staff, and superintendents to collaborate about golf course water needs. The goal was to develop and accept a golf course water use planning volume. The threshold volume in the Act is 100,000 gallons per day on average over the course of the withdrawal period. The Act also has a threshold of nine million gallons over a three consecutive month period. If either threshold is exceeded, the act is triggered. DEP will apply its procedure for consistency of review with MEPA for what triggers a Water Management Act permit. A number of courses were constructed that claimed that they did not trigger the three month threshold, and data now show that those thresholds were triggered. They came through the permit process later, and this should be avoided.

For existing golf courses, an application rate assumption of 1.12 inches per acre per week will be used. Based on drought information, it was appropriate to give credit for five inches of rain over the 13 week period. Northeast Regional Climate Center data were used. One summer, a state region had only 4.5 inches of rain for the three month period. The average rainfall between June and August was just over 11 inches. To be very conservative, they selected five inches of rain that should be planned for naturally for a drought condition. That led to an irrigation rate of 0.74 inches per week that the existing course would apply. An example shows that 9.14 million gallons would be required for an existing course of 35 acres of irrigation at 0.74 inches per acre per week. This is the justification for a threshold of 35 acres of irrigated turf. Not everything is irrigated, and not all courses irrigate the same types of areas. The idea was to capture a general range of irrigated acreage although this does not include incidentals such as landscaped areas and condominiums. Proposed golf courses require more water to develop a good grow-in, so 1.5 inches per acre per week is being used for those. Natural rain of 0.38 inches per week is credited, leaving an irrigation rate of 1.12 inches per week for proposed courses. That threshold works out to 23 acres, and that will be the permit threshold for new or proposed courses. It gives an incentive to reduce the amount of irrigated acreage. These thresholds can affect a nine-hole course.

The new acreage thresholds will be 35 acres for existing courses and 23 acres for proposed courses. The golf course will be allowed to demonstrate to DEP that they can use less water and remain below the threshold, but they are good guidelines to apply. Once the initial grow-in occurs (in the first five years), the amount of water they are allowed to use can be reduced. Factors affecting the amount of water used by golf courses include soil type, acreage, vegetation, and climate. Soil type makes a significant difference. Additional water needs that have to be evaluated for the permit include clubhouse, banquet facilities, landscaped entryways, and residential uses.

DEP tested out the policy on known golf courses. There were 319 known golf courses in total: 212 are 18 holes, 107 were less than 18 holes. Of those, 24 were permitted, 92 were registered, and 15 had demonstrated they were sub-threshold. That left 188 that were not in the system (new and existing) and the number is rising. Many courses are under construction.

Weber asked if there will be same set of standards state-wide or if they would be tailored to each geographical region. Langley responded that DEP averaged conditions across the state. The irrigation rates will also be applied to golf courses that purchase water from public water supplies (under the public its own permit). Zimmerman asked if DEP would consider credits if the golf course collects roof runoff to enhance its withdrawals from reservoirs. Often golf courses have wells that pump into lined storage ponds and pump out of there. Langley responded that DEP is accounting for the water that comes out of the well. If they are collecting stormwater runoff into a storage pond they will not be reporting that, so in a sense they would get a credit for it.

Webber asked how the course designers and operators were reacting to the standards. Langley indicated that they were cooperative to work with and want to do the right thing. They agreed it is an appropriate goal and offered DEP opportunities for public education. It seems attainable. The main concern is existing courses. An appropriate compliance plan is needed for the existing courses. There are too many to permit in the next year or two. Many of the unknown status courses are 9-hole courses, and most likely to fall below the thresholds. DEP wants to give them the opportunity to demonstrate that their use is below the threshold. This would be beneficial to DEP, because it would reduce the number of permits it needs to issue, and it would be beneficial for the courses, to avoid the need for the permit. The compliance plan encourages metering at the existing courses. DEP is asking for comments from the Commission to finalize the policy so it can be implemented soon. They would like to make it known that the best way to comply with the program and demonstrate a sub-threshold withdrawal is to meter. DEP designed a survey to mail out with correspondence to obtain information about irrigated acreage and other water uses, and to determine water conservation practices. The survey will be sent out in the next few weeks. In addition to the metering data, they would like to find out how many courses there are and whether they require permitting, locations, and allow DEP to create a compliance schedule. DEP would like to put into their regulations a provision and schedule for bringing the existing golf courses into compliance. They would like to put the established thresholds into the regulations and strengthen language in their regulations requiring entities possibly subject to the Act to provide information when it is requested.

Best Management Practices were developed for golf course water use. These will be put into Water Management Act permits for new golf courses and consider them for existing courses as they come in. These will encourage water conservation. Comments are requested over the next few days.

Tomczyk would like the opportunity for Watershed Teams to review and comment on the policy. Smith suggested they contact DEP and ask if they can comment.

Item 6: Community Water Conservation Plans

Gildesgame explained that in 1992, the Water Resources Commission adopted water conservation standards for IBT applicants, for river basin planning, to help communities improve their water conservation and system efficiency programs, and to serve as conditions for Water Management Act permits. Since then, updates and additional information have been given from communities about their conservation programs. DEM Office of Water Resources developed a water conservation assessment plan. Another one was developed in the late 1980's or early 1990's by Trish Garrigan as part of the water conservation effort by the Commission. The conservation questionnaire has been updated (a copy of the draft was distributed to the Commission in the mailing). The questionnaire was designed for public water suppliers and includes a lot of the original information and additional information that we wish to obtain from the water suppliers as a way to assess their current status in water conservation and system efficiency.

LeVangie added that the draft questionnaire was developed by a group Smith has been chairing to review all of the permitting processes together. The group identified separate surveys being sent out, which resulted in inconsistent responses. The draft survey was designed to replace and tie together the needs for Water Management, water needs projections, site screening, Interbasin Transfer, guidelines for preparing a Water Conservation Plan. The draft survey will be used by all the programs. It should be sent to the communities during the permitting process. Gildesgame added that it is not 100 percent comprehensive but will serve as a point of departure for more detailed questions that may arise. We may want to follow up with more questions to the community.

The draft is being submitted to the Commission for review and feedback so that it can be put into use as soon as possible. They would like to complete it in the next few weeks as it will be part of the site screening process. The Commission needs to vote on it. It will be put back on the agenda for the May 2000 meeting. Comments are due to LeVangie in two weeks. Smith asks to verify that the unaccounted water definition matches the one that the Commission approved late last year.

Item 4: Outdoor Water Use

A lot of worries about meeting summer demands are reported by water suppliers. This is their biggest problem, especially with automatic sprinkler systems being installed which increase

demand. Danforth will present a preliminary work plan to outline how to move forward on this project. Danforth is asking for input on the draft Lawn Water Conservation Program. They want to answer the concerns voiced at the MA Water Works meeting last fall: calls for help at the state level from systems that cannot cope with new irrigation systems. There has been an explosion of demand. The Towns may or may not put on a water ban, but often do not get much of a response. The problem is peak demand and early drawdown of the source (non-MWRA). They need help from the state in education and outreach. Danforth consulted with Mendez and Yeo of MWRA who have helped with perspective from their point of view. The outline is for a working group that represents the irrigation sector, local DPW's, DEP, and NRCS, UMass Extension, Mass. Audubon, MA Water Works Association, etc. They would like to get going quickly and develop non-regulatory advisory guidelines and possibly regulatory suggestions for communities.

The goal is to provide implementable steps on outdoor water use (green lawns). Gildesgame added that the peak demands are a real problem for community water supplies. Danforth will return next month with a draft report outlining what has worked well in educating communities, a list of which towns are experiencing the early drawdown problem, available technology, low-tech alternatives (tuna-can method, measure one inch a week) to address the problem. They would then distribute the materials to the towns that are most experiencing the problems over the summer. Gildesgame added that an idea is to identify a few towns for pilot implementation of the strategies. We need to identify which towns are already doing these things and find out what has worked. Danforth developed topics for flyers that could be distributed. There should be an outreach effort with press releases, to reassure people that if their lawns go brown, they will grow back and not to worry. Danforth solicited input and is concerned that we might be starting late already. It will take a while for the group to get started.

Smith added that the summertime water use ties into stressed basins. There aren't many systems that have trouble meeting their demand in the winter. The problem is the towns using ground water meeting their peak use and having sensitive resources nearby. This approach will provide good technical advice about how much to water, along with DEP's work on golf courses, so that towns have good information to distribute, we will know what type of water bans work, and so that the towns are better prepared. We also have to look at our regulatory abilities in places where there are actual impacts, such as Ipswich. Smith also encourages input and participation. Comments should be delivered to Danforth or Gildesgame.

Danforth indicates that Wayne Southworth from Plymouth County Water Works has been very enthusiastic and encouraging. He asks for the Commission's assistance. He and the Canoe River Aquifer group have sponsored water conservation workshops in southeast Massachusetts.

Yeo added that MWRA is very supportive of this approach. Everyone should get together on this topic. At a recent Massachusetts Water Works Association meeting, a turf expert was speaking to the water suppliers about how to promote proper lawn maintenance. MWRA has been doing outdoor water conservation education for the past 12 or 13 years. MWRA has a poster that is being updated and being added to their website. They are updating their publications and distributing kits to homeowners. MWRA is interested in working with the Commission and feels this is important. There are a number of towns (such as Sudbury) and

others that are really struggling and need some useful approaches to eliminate excessive outdoor water use.

Langley noted that DEP has been receiving comments on the draft Site Screening document and people have been strongly urging DEP to address the outdoor water use issue. Although the DEP Site Screening document is not the right place for these concerns, he urges the Commission to take action on this topic.

Tomczyk noted that the Ipswich River Watershed Association mailed out materials to all of the water suppliers in the watershed and two comments came back consistently: (1) be careful how hard you push people, because it will force them to put in private wells, and (2) think about pushing us harder, because if the state doesn't force us to, the water commissioners won't do it. These responses came back from about half of the communities.

Smith added that they need to consider the potential for a drive toward private wells. Perhaps it is a more decentralized approach and not necessarily a bad solution. Clayton asked if there will be communication with the water suppliers. Gildesgame explained they have had representatives in the work group. When there is a draft document for distribution, it will be put out for public comment. Danforth added that there was discussion of surveying water suppliers.

Langley inquired about surveying the water suppliers. Danforth responded that the questions would be about which towns were having the most severe problems meeting demand and whether those problems were associated with irrigation. Langley noted that DEP had already been surveying the water suppliers to find out which ones have water use restrictions.

ITEM 7: Update on Stressed Basins.

Gartland reported that a committee meeting was recently held. Refer to a written summary and recommendations that had been previously distributed. The memo included elements that should be included in a definition of stress. The elements include quantity, quality, and accessibility to fish (habitat). A lot of comments were received that agreed with the approach. Some felt that there was too much being asked for in the definition (and it won't be completed quickly enough), and others felt there was not enough. There had not been a meeting since last August, and since then staff has been working on an analysis of stream gauges and river flows.

The other item was a methodology for determining whether or not a basin or subbasin was stressed. Summaries of both are attached to the memo. The first item is the interim methodology for determining stressed subbasins. It is similar to the DEM inflow/outflow method. It summarizes the water withdrawals and returns to a subbasin. The second page outlines the criteria, using red, yellow, green colors. For red, a net outflow for the subbasin that equals or exceeds the estimated natural 7Q10 flow. For yellow, the net outflow from a subbasin is less than the estimated natural 7Q10 flow. The green is if there is a net outflow that is a net gain or break even condition in the subbasin. The committee wanted to think about this strategy some more. There was also discussion about the implications of the 7Q10 criteria. For the next stressed basin committee meeting, staff will describe the method used for the basin plans (which

used the 1980-1981 drought) and will compare those to the 7Q10 values. A comparative analysis will also be done to show the results for different sized subbasins.

Smith clarified that the first piece is a methodology that an applicant would use for an interbasin transfer, and perhaps for Water Management and sewer projects to calculate the inflow and outflow and to provide some thresholds that could be used to judge the stress based on the local water balance. We can't do this ourselves because we don't have the water and sewer infrastructure mapped state-wide. It makes sense to ask the proponent to do the calculations and we will provide the thresholds to determine whether they are in a stressed basin.

The second method is to evaluate existing stream gauges using a variation of The Nature Conservancy's Indicators of Hydrologic Alteration (IHA). This method looks at 32 different statistics of streamflow. Three statistics were chosen for this analysis: the average August monthly flow, the seven-day minimum flow, and the low-pulse duration (the duration of a low flow event). The data were normalized by drainage area to develop numbers that could be compared from one basin or gauge to the next. The data were divided into low, medium, and high values that were assigned the red, yellow and green designations. On the hand outs, the top six or seven rivers on the table were red for all of the statistics. The group found that the same rivers kept coming up in the red zone (low flow) for a number of the statistics. Based on the breaks in the data, thresholds were identified for each of the statistics to separate the values into categories. For example, for the average August monthly flow rating, the red designation was below 0.35 cfsm; yellow was between 0.35 and 0.5 cfsm; and green was greater than 0.5 cfsm. It was interesting that everything seemed to group together for all of the statistics (for the most part). This will be used to lead into further work. The committee was somewhat concerned about setting thresholds. We are looking for useful empirical thresholds that can be used to identify basins or subbasins where potential issues will have to be reviewed. More work would have to be done in these areas if a project is proposed. The values are not intended to be used to stop existing activities. The work will be extended to look at Aquatic Base Flow and the Tennant method. These methods will be applied to the same list of gauges and see where the results fall. Some analysis was done on the gauges to look at the relationship of longer periods of low flows and shorter high flow events (impervious surface relationships, e.g., if there are shorter peaks associated with longer low-flow events). We could not get a good correlation on that. Gartland clarified that the values shown are the median of the period of record average August monthly flow values, as used by the U.S. Fish & Wildlife Service and in the IHA method.

O'Donnell indicated that there appeared to be two different methods that could be applied, depending on whether or not a USGS gauge was available. How would the two methods be used in tandem? Would the gauge data be used for sites with existing data? What if the site is in a headwaters without a nearby gauge? Would the other methodology be relied on? Gartland indicated that this would likely be the case. We are working on a way to get this analysis to the subbasin level. If all categories are indicating triple-red (like the Upper Ipswich), everything upstream would be considered in the red zone. If a site is in the triple-red zone, it could be used as a screening tool to steer an applicant away from an area. The analysis was done without really knowing where it would lead. The committee is still discussing how to apply the classifications. The DEP Site Screening document has criteria and the Committee is trying to be consistent with

that (which use August median flow) and wastewater methodology (comprehensive wastewater planning). O'Donnell asked if the committee will also consider appropriate mitigation ratios for each of the categories. Gartland indicated that the committee would try to get to that point. Not only would we want the consultant to determine how much in the red but how much mitigation would be necessary to offset that. That concept is still in place.

There has been a lot of pressure to include everything in the definition and there was some hesitance to use quantity only. Some people wanted to include quality, habitat, rare and endangered species--every factor out there. Letters were received indicated that more factors should be included, although there was also support to put something in place as quickly as possible. Smith indicated that the group decided to confirm that the numbers really work and once we are convinced that the numbers really represent the phenomena, we would decide what to do with them and how to use them. We want to be cautious about how the numbers will be used until we know exactly what they are telling us. It is convenient that the rivers and values divided themselves up into categories. Gartland indicated that the "stressed" results don't necessarily indicate that there is a human impact to the river. It may just be that the river is just located in an area without a lot of stratified drift, and therefore there isn't a lot of summer flow. Smith used streams out in the Quabbin drainage area as an example. The stress could just be a naturally weak stream.

O'Donnell offered feedback to the group that the method is a really good cut and if more factors can be added quickly, that would be fine, but we have waited a long time already for some general guidance. She felt that the analysis had been run three different ways and resulted in some general consistency. We will stop losing value to keep analyzing it for no real gain. If there is nothing anomalous, we should prepare it and we should get going with it. If over time, additional factors can be added in the future, it can be done when the data are available. The Commission will offer guidance if necessary. O'Donnell would like this wrapped up and presented at the June meeting for implementation, even if it will be added to in the next year. She would like the method to be used as part of the site screening criteria. Smith responded that the document should be put out for comment and be brought back before the Commission by August or September as final. Gartland will try to push it along.

Gartland offered copies of the USGS Ipswich Report.

Item 8: Update on Standing under Interbasin Transfer Act

Drury presented an update. Refer to memo in package containing a report from the Standing Committee meeting. The meeting went well, and staff presented proposed regulation changes to the group that were well received. There were some changes suggested, and the members were asked to respond in writing with their proposed changes by March 31. These were distributed. There were two suggested changes. The Commission should review these in the context of the current regulations. The intent of the proposed regulation changes is to allow a third party to alert the Water Resources Commission to potential interbasin transfers, if a proponent doesn't initiate the process. This would give third parties a formal framework to petition the Commission to review a project. Public hearings and comments are already part of the

Interbasin Transfer process. Staff would like the Commission's comments on the proposed revisions in two weeks. Smith added that the intent is to allow third parties to inquire about the applicability of the Interbasin Transfer Act to certain projects. The Commission would have 90 days to respond to the inquiry. Then both the proponent and the third party would be notified of the opinion. It is basically the same policy used by the Commission at present, but the change would add it to the regulations.

Other comments were offered but those did not directly address the standing issue. The committee indicated that the standing revisions could wait until a more comprehensive regulation change is undertaken, rather than opening the process just for this issue. Smith added that there is another effort to re-evaluate how wastewater is handled in the regulations, which is likely to result in changes to the regulations. Smith recommends waiting to see how this process develops. If the wastewater changes won't take longer than a few months, we should wait and do only one set of regulation changes. Smith felt that the standing issues could be done quickly. Drury added that Rich was a member of the group and was very helpful. Smith added that Nancy Kurtz of MWRA wrote detailed comments on the language and it was valuable to have another attorney's input.

Meeting Adjourned

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